Examining the Prevalence of Color Vision Defect and its Related Factors among Dental Students in Ardebil Dental School in 2016

Abstract

Background: Shade matching is one of the main factors in satisfying patients in dentistry. Since the most common method of shade matching in dentistry is visual observation and color vision defect can influence shade matching ability of dentists, the current study aimed to determine the Prevalence of Color Vision Defect and its Related Factors among Dental Students in Ardebil Dental School in 2016.

Materials and Methods: In a descriptive-analytic observational study, 158 dental students of Ardabil University of Medical Sciences were evaluated in terms of color vision defect by using Ishihara Test.

Results: Of the participants, 90 (57%) were male and 68 (43%) were females. Color vision defect were seen in 7 patients (4.4%) that all of them were males and there was no color vision defect among female students (7.8% versus 0% and P=0.020). Risk of color vision defect among males was 11.4 times that of female (95% confidence interval: 0.665 to 195.5). There was a significant correlation between color vision defect and its family history so that the frequency of familial history of color vision defect among patients was significantly higher (28.6% vs. 2% and P=0.016). The risk of color vision defect in individuals with a family history of this defect was 12.2 times that of individuals without familial history (95% confidence interval: 3.1 to 48.5). There was no statistically significant association between color vision defects and refractive errors (myopia, Hyperopia, and astigmatism).

Conclusion: Our findings showed that the frequency of color vision defect among students of Ardabil dental school is similar to other studies in the country and its frequency is significantly higher among males and is almost uncommonly prevalent among females. It is suggested that in order to achieve appropriate shade matching, dentists with color vision defects use assistive techniques such as team approaches, counseling with assistants, or using auxiliary tools such as VITA Easyshade.

Key words: color vision defect, color blindness, dental students, shade matching.